

Public Policy toward Nongovernmental Organizations in Developing Countries

William Jack

If a developing country government is not good at providing public services such as health care, education, and social protection, would NGOs be better at doing so? What advantages do NGOs have over for-profit providers of publicly funded services? And considering the importance of donor funding, which is better for delivering such services, an international NGO or a grassroots NGO?



Summary findings

Jack presents two descriptive models of nongovernmental organizations and poses normative questions about public policy toward NGOs. In situations in which optimal government intervention in a distorted or inequitable economy employs an NGO-like body, he considers which kinds of NGO might be used.

First, in many developing countries NGOs participate in the delivery of what are essentially private goods—in particular, health care and education. In an economy without NGOs, there may be good redistributive and efficiency reasons for the government to provide these goods in kind. But if direct government provision of such services is ineffective or inefficient, when is contracting out to an NGO-like institution preferable to using a traditional for-profit firm? (Another way to frame this is to ask: What is the optimal taxation and regulation of private providers of publicly financed services?)

NGOs also provide useful real and financial links with external donors. They are used to provide services the government favors and donors are willing to fund. In this model, the service provider is chosen to yield the best outcome for both government and donor.

In this context, Jack compares an international NGO and a grassroots organization.

It may be more efficient to transfer donor funds through an international NGO than through a local NGO, but when donor-government cooperation fails, a project implemented by an international NGO is effectively killed. If a project implemented by a local organization can limp along, this otherwise less efficient organization might be preferred.

This paper—a product of Public Service Delivery, Development Research Group—is part of a larger effort in the group to understand the role of NGOs in delivering basic public services. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Hedy Sladovich, mail stop MC2-204, telephone 202-473-7698, fax 202-522-1154, email address hsladovich@worldbank.org. Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at wgi@georgetown.edu. July 2001. (25 pages)

The Policy Research Working Paper Series disseminates the findings of work in progress to encourage the exchange of ideas about development issues. An objective of the series is to get the findings out quickly, even if the presentations are less than fully polished. The papers carry the names of the authors and should be cited accordingly. The findings, interpretations, and conclusions expressed in this paper are entirely those of the authors. They do not necessarily represent the view of the World Bank, its Executive Directors, or the countries they represent.

Public Policy Toward Non-Governmental Organizations in Developing Countries*

William Jack
Department of Economics, Georgetown University, wgj@georgetown.edu

*This paper represents a first step in an on-going research project "Public policy towards non-profit organizations in developing and transition economies," undertaken in association with the Development Economics Research Group at the World Bank.

0.1 Introduction

This paper is a first attempt at writing down some descriptive models of non-governmental organizations with which to pose and evaluate normative questions regarding public policy towards these institutions. One approach to the normative study of NGOs is to begin with a definition of what an NGO is and how it behaves, and then to make welfare comparisons among alternative policies that might be adopted. For example, Besley and Ghatak (2000) quote the UN Inter-agency Committee on Integrated Rural Development for Asia and the Pacific (1992) as listing six defining characteristics of NGOs: they are voluntary, non-profit, service and development oriented, autonomous from the government or political parties, have a high degree of motivation and commitment, and some form of formal registration. However, this list encompasses such a broad range of organizations that it is difficult to make precise positive predictions or, on that basis, normative prescriptions.

Instead, this paper will approach the issue from a different perspective. There are well understood reasons for government intervention in the economy - viz. the correction of market failures (externalities and public goods) and the redistribution of income. If an institution that calls itself an NGO neither contributes to market failures nor adversely affects the distribution of income, then there is no reason for the government to intervene in its activities. On the other hand, it may well be the case that mechanisms by which a government intervenes in a distorted or inequitable economy include the use of agents or groups of agents that look like NGOs in some respects. Thus the approach of this paper is to examine situations in which optimal government intervention is characterized by the employment of an NGO-like body.

Two features of potential NGO involvement are highlighted here. First, in many countries of the developing world, NGOs participate in the delivery of what are essentially private goods - in particular health and education. In an economy without NGOs, there may be good redistributive and efficiency reasons for the government to provide these goods in kind (Besley and Coate, 1991).

Here we ask, If direct government provision of such services is ineffectual or very inefficient, when is contracting out to an NGO-like institution preferred to using a traditional for-profit firm? Alternatively, identifying the tax and regulatory treatment of the provider as determining its NGOness, this question can be rephrased as What is the optimal taxation and regulation of private providers of publicly financed services?

The second feature of NGOs in developing countries that seems important is their financial and real links with external donors. NGOs are used not only to provide services that the government favors, but also those that donor agencies are willing to fund. In the model of the second main section of this paper then, the type of provider of these services is chosen to yield the best joint outcome for the government and donor. I provide an interpretation in which use of an international NGO and a grass roots NGO can be compared. There are two essential differences between the two kinds of NGO in this model. First, transferring donor funds to the international NGO is more efficient than transferring them to the grass roots organization. However, secondly, when government-donor cooperation fails, a project implemented by an international NGO is effectively killed, while it is assumed that one implemented by a grass roots organization can limp along. Thus the normative analysis does not focus on the NGO versus for-profit firm question, but on the kind of NGO chosen to implement a desired policy.

Both of these models place limits on the ability of governments, donors, and/or providers to sign enforceable contracts. In the first model, inability to make contractual commitments regarding the quality of the service produces divergent behavior of NGOs and other private providers. In the second model, it is the inability of the government and the donor to write enforceable contracts that means the choice of NGO (which corresponds to an allocation of authority between the two) has substantive effects on incentives.

The next section presents some background information on NGOs in developing countries. Section 3 describes a model in which a firm's quality and cost responds to its degree of NGOness, and the implications for government contracting. Section 4 introduces external donors in a model

that differentiates between international and grass roots NGOs. Section 5 concludes with some suggestions of empirical strategies that might be followed in testing the models and informing policy.

1 Some background

In contrast to the growing body of work on non-profit institutions in the United States and other developed economies (e.g., Rose-Ackerman, 1996), there has been little systematic work on NGOs, and appropriate public policies towards them, in developing and transition countries. This is not because they play only a minor role in these economies. For example, there were over 1,000 NGOs active in Bangladesh in the early 1990s (Stocker and Barbor-Might, 1999, p. 7). Similarly, there are more NGOs in Uganda than for-profit enterprises. The increased prominence of the non-profit sector has had a significant impact on World Bank operations: in 1989, only 20 percent of World Bank-supported projects had provisions for NGO involvement, but by 1997, this had increased to 46 percent of projects (World Bank, 1999).

The issue is also important in the transition countries, where there has been a substantial breakdown in public services. In addition to cutbacks in purely commercial activities of government, many countries have reduced public good provision, in areas such as health care, education and social protection. Some commentators are asking whether these goods and services could be better provided by NGOs.

Many of the questions about NGO behavior in developing economies are similar to those in developed countries. How do NGOs finance their operations (e.g., through donations, government payments and grants, support from donors, or user fees)? Which sectors are dominated by NGOs and in which do they coexist with other providers (i.e., government agencies and for-profit enterprises)? What are the advantages, and disadvantages, of NGO provision that allow them to continue to operate in sectors where for-profit firms are active? Do NGOs serve different clients

or areas than other providers? Do they provide different levels of product or service quality? Are they more cost efficient? How do government contracts affect the behavior of NGOs? These kinds of questions motivate the model of the following section.

In addition to questions that apply in both developed and developing economies, other issues arise more specifically in developing economies. The most important of these is undoubtedly the question of how interaction with donors affects NGO behavior (Stocker and Barbor-Might, 1999).

Many of the presumed benefits of NGO activities derive from a belief that NGO workers are more diligent and better motivated than their counterparts in other organizations, such as private firms and government bureaucracies. One oft-cited manifestation of this is innovation. As Riddell and Robinson (page 35) remark, “NGOs pride themselves on being innovative, in the sense of introducing new techniques as well as in fostering novel forms of social organization.” However, these authors also note that less-enthusiastic observers point to the slow response of some NGOs, their cumbersome decision making processes, and in-fighting (page 38). Both the internal organization of NGOs as well as the motivation of the workers they employ likely jointly affect NGO outcomes.

Another sometimes important aspect of NGOs is the degree of trust shared between its workers and consumers of the goods and services produced, especially in the case of health care. In countries where government bureaucrats have reputations for low quality service or outright exploitation, NGOs start with a comparative advantage (although not necessarily compared with other private providers). Again, the underlying motivation of the NGO staff seems to be important in this respect.

2 NGO status and commitment to quality

In a recent paper, Glaeser and Shleifer (1998) have used an incomplete contracts model to argue that non-profit status may serve as a mechanism by which firms can credibly commit to maintain-

ing quality. In their model, the essential feature of being a non-profit is that profits can not be consumed efficiently by the firm owners, but must be consumed in kind as perquisites. This lowers the return to cost-reducing effort, and, under the assumption that such effort also reduces quality, reduces the incentive of the firm to deliver sub-standard goods. Anticipating this, consumers are willing to pay higher prices. When choosing NGO status, the firm compares the gains associated with higher prices against the loss of having to consume profits inefficiently. We will examine the choice made by a purchaser (the government) who can contract out service provision to either an NGO or for-profit firm.

One way in which the model of this section can be interpreted in contrast with that of Glaeser and Shleifer is that in their model, non-profit status is used as a *signaling* mechanism on the supply side - i.e., by firms, while here it is used as a *screening* device on the demand side - i.e., by the government (i.e., the purchaser).¹

2.1 The effects of effort

The assumption of the Glaeser and Shleifer analysis that cost reducing effort necessarily lowers quality appears to miss at least one aspect of the NGO story - that is, that NGOs have an independent preference for quality, in some sense. One indication of this is the extent to which they rely on volunteer (or apparently under-paid) labor, and other uncompensated contributions. It would seem more realistic to assume that effort, however construed, instead of necessarily reducing quality, has the effect of changing the trade-off between non-effort costs and quality.²

Specifically, consider the provision of a single unit of a good (e.g., health coverage for a village) and suppose monetary costs are $c(q, e)$, where $q \geq 0$ is the quality of output and $e \geq 0$ is the effort the provider exerts. We assume $c_q > 0$, $c_{qq} > 0$, $c_e < 0$, $c_{ee} > 0$ and $c_{qe} < 0$: there are decreasing

¹ The literature on signaling almost always entails an environment of asymmetric information. Glaeser and Shleifer's model is one of symmetric information, so the terminology is employed a little loosely here. Later, our model will incorporate an element of asymmetric information.

² This could occur within a model of two types of effort, one that was directed at cost control, the other at quality improvement. If the two efforts are substitutes, a higher total effort level could conceivably lead to lower costs and higher quality.

returns to quality, and effort reduces costs, given quality, at a declining rate. Also, normalize quality and effort so that $c(0, 0) = 0$.

Following Glaeser and Shleifer, suppose the purchaser (i.e., the government) has agreed to pay a price p for the good, but that the quality is non-contractible. If the provider cares only about net revenues $r = p - c(q, e)$ (consumed efficiently or not) and the non-pecuniary costs of effort, e , it is clear that he will have no incentive to provide any quality above zero (a normalized minimal level), nor any effort. That is, in the formulation of Glaeser and Shleifer, the entrepreneur's objective is

$$\pi_d = d(p - c(q, e)) - e$$

where $d \leq 1$ represents the efficiency with which cash receipts are consumed and $d < 1$ for an NGO. Thus the more heavily restricted is the provider's use of revenues, the lower is d . Given p , this is maximized by setting $q = e = 0$.

But suppose the entrepreneur derives some utility from the quality of the good provided, αq . We can interpret this as altruism, in-kind compensation for contributors, or the pursuit of some non-monetary goal. Then

$$\pi_d = d(p - c(q, e)) - e + \alpha q \quad (1)$$

and the first order conditions for an interior solution (which we shall assume to be sufficient) are

$$\begin{aligned} c_e &= -\frac{1}{d} \\ \text{and } c_q &= \frac{\alpha}{d}. \end{aligned} \quad (2)$$

Total differentiation of these conditions shows that quality and effort both increase with α . That is, as long as the second order conditions are satisfied (i.e., $(c_{qq}c_{ee} - c_{qe}^2) > 0$),

$$q^{*'}(\alpha) = \frac{c_{ee}}{(c_{qq}c_{ee} - c_{qe}^2)} > 0$$

and

$$e^{*'}(\alpha) = \frac{-c_{eq}}{(c_{qq}c_{ee} - c_{qe}^2)} > 0.$$

2.2 The impact of NGO status on quality, effort, and cost

In the model of Glaeser and Shleifer, NGO status, that is $d < 1$, has the unambiguous effect of reducing the return to, and hence equilibrium level of, effort. Here however there is a countervailing effect: as d falls, the relative price of the implicit benefits of quality compared with monetary income, which equals α/d , increases. This induces the firm to increase quality, which in turn increases the return to effort (since the cost reduction effect of effort is larger when quality is higher). To examine which effect dominates, we totally differentiate the two first order conditions above with respect to d , and find

$$q^{*'}(d) = -\frac{1}{d^2} \left(\frac{\alpha c_{ee} + c_{qe}}{c_{qq}c_{ee} - c_{qe}^2} \right).$$

Assuming the second order condition is satisfied the firm's quality choice increases with NGO status as d falls below 1 (i.e., $q^{*'}(d) < 0$) if and only if

$$\alpha c_{ee} + c_{qe} > 0.$$

Solving the first order conditions (2) for α and substituting we find that NGO status leads to higher quality if and only if³

$$-\frac{c_q}{c_e} > -\frac{c_{qe}}{c_{ee}}. \quad (3)$$

If condition (3) holds, then the purchaser of the good or service, who anticipates this effect, will be willing to pay a higher price to an NGO provider than a for-profit provider. Similar

³ This is satisfied if the slope of the constant cost curve in (q, e) -space is always greater than that of the curve along which c_e is constant:

$$\left. \frac{de}{dq} \right|_c > \left. \frac{de}{dq} \right|_{c_e}.$$

Alternatively, defining ϵ_{ee} and ϵ_{qe} as the elasticities of c_e and c_q with respect to e , that is,

$$\epsilon_{ie} = -\frac{e}{c_i} c_{ie},$$

NGO status yields higher quality if and only if

$$\epsilon_{ee} > \epsilon_{qe}.$$

calculations show that NGO status leads to higher effort, that is $e^{*'}(d) < 0$, if and only if⁴

$$-\frac{c_q}{c_e} > -\frac{c_{qq}}{c_{qe}} \quad (4)$$

Thus NGOs produce higher quality output and exert higher effort if both (3) and (4) hold.

To gain a little intuition for what these conditions mean, let us consider the case of separable cost functions, wherein

$$c(q, e) = g(e)h(q)$$

with $g' < 0$, $g'' > 0$, $h' > 0$, and $h'' > 0$. Then condition (3) becomes simply

$$\frac{gg''}{g'^2} > 1.$$

In the special case where the marginal effect of effort is proportional to the level, that is, when $g(e) = k \exp(-\gamma e)$, NGO status has no impact on the quality chosen, that is $gg''/g'^2 = 1$. Similarly, with e bounded away from zero, if $g(e) = k/e$, $gg''/g'^2 = 2$, so quality increases with NGO status.⁵

Also, with a multiplicative specification, condition (4) reduces to

$$\frac{h'^2}{hh''} > 1.$$

In this case, if h is a power function, $h(q) = kq^n$, for any $n > 1$, the left hand side is equal to $n/(n-1) > 1$. Thus for this class of cost functions, NGO status always leads to an increase in effort.⁶

⁴ Alternatively,

$$\left. \frac{de}{dq} \right|_c > \left. \frac{de}{dq} \right|_{c_q}.$$

Writing ϵ_{iq} as the elasticity of c_i with respect to q , this reduces to

$$\epsilon_{qq} > \epsilon_{eq}.$$

⁵ Another interpretation of this condition is as a kind of decreasing returns. Treating g' as a function of g , gg''/g'^2 can be written as

$$\frac{g}{g'} \frac{\partial g'}{\partial g}.$$

This elasticity being greater than one is equivalent to requiring that g' is decreasing and concave in g .

⁶ This condition can be thought of as a similar kind of decreasing returns as in the previous footnote. Treating h' as a function of h , the condition $h'^2/hh'' > 1$ is equivalent to requiring that h' be an increasing and convex function of h .

The net impact of these changes in quality and effort on monetary costs is of course ambiguous. Using the first order conditions for effort and quality choice, the derivative of equilibrium costs with respect to NGO status can be written

$$c^{*'}(d) = \frac{1}{\Delta d^2 c_e} [c_e^2 c_{qq} - 2c_e c_q c_{eq} + c_q^2 c_{ee}].$$

Using the multiplicatively separable specification, this reduces to

$$\begin{aligned} c^{*'}(d) &= \frac{1}{\Delta d^2 c_e} \left[\left(\frac{hh''}{h'^2} - 1 \right) + \left(\frac{gg''}{g'^2} - 1 \right) \right] \\ &\equiv \zeta [T_e + T_q] \end{aligned}$$

where $\zeta < 0$, T_e is the first term inside the square brackets, and T_q the second. Thus when NGO status leads to higher effort ($T_e < 0$) and lower quality ($T_q < 0$), costs fall ($c^{*'}(d) > 0$). Similarly, when NGO status leads to lower effort and higher quality, costs increase. In the range of particular interest, when NGO status raises quality ($T_q > 0$) and costs ($T_e < 0$), the effect on costs is ambiguous.

2.3 Welfare implications

Which type of firm should the government choose? That is, if the government contracts out the provision of a service, under what conditions should it require the provider to be a non-profit organization?

We will assume that the government chooses its procurement policy – i.e., the kind of organization from which to purchase – so as to maximize a welfare function of the form

$$W = V(q) - (1 + \lambda)p + \beta\pi_d.$$

$V(q)$ is the gross surplus generated by services of quality q , and $\lambda > 0$ is the marginal excess burden associated with a distortionary tax system used to raise the funds needed to purchase the services. (Thus $V(q) - (1 + \lambda)p$ is the consumers' net benefit.) π_d is the (real value of the) profit earned by the provider (see 1), and $\beta \in [0, 1]$ is the relative social value of provider benefits compared with

consumer benefits. Denoting the net economic cost of production by $\Gamma(q, e; d) = c(q, e) + (e - \alpha q)/d$, social welfare can be written

$$W = V(q) - (1 + \lambda)\Gamma(q, e; d) - \left(\frac{1 + \lambda}{d} - \beta\right)\pi_d.$$

For $d \leq 1$, $((1 + \lambda)/d - \beta) > 0$, so the firm's profits should be as low as possible. Assuming the firm cannot be forced to suffer losses, this reduces to $\pi_d = 0$. From (1), the government sets

$$p = \Gamma(q, e; d).$$

For example, for a for-profit firm, it sets a price large enough to cover monetary costs plus the costs of effort, less the in-kind benefit that accrues to the firm due to its valuation of quality. For the same quality and effort choices, a non-profit firm or NGO with $d < 1$ must be paid more. Clearly then, if the government wished to purchase services at minimum cost, it would not choose an NGO unless the quality and cost of NGO provision differed from for-profit firms in the appropriate fashion. Indeed, if the cost function is of the form

$$c(q, e) = k \exp(-\gamma e) q^n,$$

then as shown above, NGO status has no impact on quality and a positive impact on effort, so provision by an NGO could be preferred. The lower production costs would need to be offset against potentially higher financing costs.

Formally, the government's problem is to choose d to solve

$$\begin{aligned} \max_d \quad & V(q) - (1 + \lambda)\Gamma(q, e; d) \\ \text{subject to} \quad & q = q^*(d) \text{ and } e = e^*(d). \end{aligned}$$

Alternatively, in a discrete choice model, the government can choose either a for-profit firm ($d = 1$) or an NGO ($d = d' < 1$). NGO provision is preferred if and only if

$$\begin{aligned} V(q_N) - (1 + \lambda)\Gamma(q_N, e_N; d') &> V(q_F) - (1 + \lambda)\Gamma(q_F, e_F; 1) \\ \text{or } V(q_N) - V(q_F) &> (1 + \lambda)[\Gamma(q_N, e_N; d') - \Gamma(q_F, e_F; 1)] \end{aligned}$$

where $x_N = x^*(d')$ and $x_F = x^*(1)$. Thus NGO provision is preferred if the gross benefits of higher quality outweigh the increased financing costs. In the special case $c(q, e) = k \exp(-\gamma e)q^n$, NGO provision is preferred as long as

$$\Gamma(q_N, e_N; d') < \Gamma(q_F, e_F; 1)$$

or

$$c(q, e_N) + (e_N - \alpha q)/d' < c(q, e_F) + (e_F - \alpha q)$$

which reduces to

$$[g(e_F) - g(e_N)]h(q) > e_N - e_F - \eta q$$

where $\eta = \alpha(\frac{1}{d'} - 1) > 0$. The left hand side is equal to the cost savings due to higher effort, and the right hand side represents the higher financing costs needed to compensate the firm for its increased effort, net of the implicit value of quality.

2.4 Screening contracts

Suppose the government is uncertain as to the rate at which implicit quality-related benefits accrue to a firm, α . Firms with high values of α are attractive providers as they are cheaper to finance, but even firms with lower α values might be preferred to no provision at all (or whatever the alternative is). Offering firms the choice between NGO status and for-profit, coupled with corresponding pricing policies, might allow the government to effectively sort the firms according to their types. In general at least one type of firm will earn a rent in this situation, so the zero-profit condition will not bind for all firms. Welfare is lower than in the first best, but higher than applying the same procurement terms to all firms.

To examine this issue, let us consider d as a continuous variable once again. Throughout this subsection we shall assume that NGO status raises quality, i.e., that condition (3) holds. The profit of an α -type firm that is paid a price p and that must consume profits with efficiency d , is

$$\pi^*(p, d; \alpha) = \max_{q, e} d(p - c(q, e)) - e + \alpha q$$

Using the envelope theorem, the slope of a firm's constant profit curve in (d, p) -space is

$$\begin{aligned}\left.\frac{dp}{dd}\right|_{\pi=\text{const}} &= -\frac{[p - c(q^*(d, \alpha), e^*(d, \alpha))]}{d} \\ &= -\frac{[p - c^*(d, \alpha)]}{d}\end{aligned}$$

which is negative for all points at which the financial transfer to the firm at least covers monetary costs.⁷ It can be shown that, under the same conditions as in (3), monetary costs are higher the higher is α , in which case the constant profit curves become flatter as α increases.⁸

I will assume the iso-profit curves to be convex, that is

$$\left.\frac{d^2p}{dd^2}\right|_{\pi=\text{const}} = \frac{2(p - c^*)}{d^2} + \frac{1}{d} \frac{\partial c^*}{\partial d} > 0.$$

(The first term in this expression is positive as long as the firm doesn't make a loss. The second could be positive or negative, although in the specific example above, with exponential and power functions, it is negative. In this case we assume the first dominates over the relevant range.)

Let us also examine social welfare in (d, p) -space. To simplify, assume $\beta = 0$. Then

$$W = V(q^*(d, \alpha)) - (1 + \lambda)p$$

with iso-welfare curves of slope

$$\left.\frac{dp}{dd}\right|_W = \frac{V'(q^*)q_1^*(d, \alpha)}{1 + \lambda}.$$

Assuming NGO status increases quality, this slope is negative. I shall assume the slope is decreasing, so iso-welfare curves are concave to the origin. Also, reasonable conditions on the underlying functions ensure that as α increases, this slope gets (algebraically) smaller.⁹

⁷ This will be the case whenever effort costs are more than the implicit benefits of quality, which seems to be the interesting case.

⁸ To see this, note that

$$\begin{aligned}\partial c^* / \partial \alpha &= \partial c^* / \partial q \times \partial q / \partial \alpha + \partial c^* / \partial e \times \partial e / \partial \alpha \\ &= (c_q c_{ee} - c_e c_{eq}) / \Delta\end{aligned}$$

where $\Delta > 0$ is the second order condition term. Thus $\partial c^* / \partial \alpha > 0$ if and only if the numerator is positive. But this is just condition (3).

⁹ Indeed, as long as $\partial^2 q^* / \partial d \partial \alpha < 0$, then $\partial^2 p / \partial d \partial \alpha < 0$.

Thus we can draw Figures ?? and 3. Figure ?? shows the case of full information. The government knows which kind of firm it is dealing with, and specifies an efficiency parameter d (the degree of NGOness) and a price p , to maximize welfare subject to a zero profit constraint. The optimal contracts are thus $x_H = (d_H, p_H)$ if it procures services from a firm with a high value of α , and $x_L = (d_L, p_L)$ if it purchases from a firm with a low value of α , as shown in the figure. The qualitative feature of this pair of contracts is that under both, the firm is paid approximately the same price for the service (i.e., $p_L \approx p_H$), but the firm that values quality more is required to act as an NGO (that is, $d_L \gg d_H$).

When firms are free to choose between these contracts, both types will choose the contract at x_L , which provides α_L -types with zero profits, but α_H -types with positive profits. Thus the pair (α_L, α_H) is not incentive compatible. An incentive compatible pair of contracts must satisfy the particular constraint that an α_H -type will prefer the contract proposed for it than that proposed for the other type of firm.

In Figure ??, the case of asymmetric information is shown. Depending on the proportion of α_H and α_L types in the population, the incentive compatible optimum is to offer the two contracts $\hat{x}_H = (\hat{d}_H, \hat{p}_H)$ and $\hat{x}_L = (\hat{d}_L, \hat{p}_L)$. As drawn in the figure, the first best contracts are characterized by the two types of firm continuing to have relatively different NGO status (that is, $\hat{d}_H < \hat{d}_L$). However, the incentive constraint also means that the α_H -type firms must be paid relatively more in order to induce self-selection. Indeed, firms with low implicit quality valuations self-select and accept for-profit status at a low price, while those with high implicit quality valuations choose the contract that pays a higher price, but under the condition that the firm adopts NGO status.

3 Donors, governments, and NGO choice

In many circumstances it is useful to think of NGOs as having links with both a government and an external donor. These links facilitate financial flows - that is, donors and governments

each provide resources for NGO activities, but they also involve aspects of control. That is, the financing is not unconditional and lump-sum. In this section I will use the ideas developed in Besley and Ghatak (2000) and Jack (2000), which derive from the more general literature on incomplete contracts of Grossman and Hart (1986) and Hart and Moore (1990), to examine the role of NGOs in the design of government-donor interactions.

NGOs serve as important vehicles for the delivery of foreign assistance to poor countries. (Riddell and Robinson (page 32) report that the largest component of external aid directed through NGOs was in the form of cofinancing of development projects (the other financier being the government.¹⁰)) In this section we consider an international donor and a national government each with its own preferences over the provision of some service. The two parties need to delegate the responsibility for delivery of the service to an agent. We compare two organizational structures. In the first structure the donor and the government directly contribute resources to the agent, while in the second more vertical relationship donor funds are channelled through the government to the agent.

Within the context of standard incentive theory, the first structure represents a common agency problem (see e.g., Martimort, 1996), while the second is a multi-layered principal-agent model (Lafont 1990, and Tirole, 1986). In this paper we abstract from the information asymmetries that underpin this strand of the incentives literature, and that determine optimal mechanisms/contracts that govern relationships between the parties. Instead we focus on the inability of the two principals (the government and the donor) to write and abide by any contract.

In comparing these two alternative organizational forms, we should use the well-being of a country's citizens to judge their relative merits. Certainly, the preferences of donors and governments are likely to differ, and it is not always clear which of these should be used as a normative base. NGOs that provide credit for low income individuals and thereby correct a capital market

¹⁰ Roger C. Riddell and Mark Robinson, *Non-Governmental Organizations and Rural Poverty Alleviation*, Overseas Development Institute, London, Clarendon Press, Oxford, 1995.

failure might be valued and supported by a government, but those whose primary objective is to support political organization of the poor might not be. Similarly, NGOs that focus on the provision of health and/or education services typically serve a redistributive role (depending on the source of financing), as do those with gender-specific goals (although there are potential efficiency benefits from all of these redistributive actions, say if children's health increases with redistribution of income from men to women). In these cases, the government's objectives may differ widely from those of an international donor.

3.1 A model of international and grass roots NGOs

Consider a project that is to be implemented through an agent. Implementation requires the inputs of a donor, e_d , and the government, e_g . Two scenarios will be considered. Under the first, the two parties engage an international NGO to implement the project. This NGO may or may not be closely linked with the donor itself. The important point is that the inputs of both the donor and the government are made directly to the project, managed by the NGO. Under the second scenario, a grass-roots NGO is engaged. This NGO has no formal links with the donor, so the donor's inputs into the project must be channelled through the government. This kind of resource transfer might be identified as technical assistance, as opposed to the direct provision of inputs into production.

The behavior of the NGO itself is passive, although one can interpret the input of the government as the provision of incentives for performance by the NGO. Under the first scenario, the quality of output produced by the NGO is $q = v(e_d, e_g)$, which is increasing and concave in both arguments. However, in the second scenario when the donor contribution must be channelled through the government, it becomes less productive, and the quality of the output of the grass roots NGO is reduced to $q = \gamma v(e_d, e_g)$, where $\gamma < 1$.

The second organizational form (grass roots NGO delivery), while less efficient, has the advantage that it can continue to implement the project if cooperation between the government and

the donor breaks down. We can think of the government learning about the production process as a result of the donor's (otherwise less efficient) technical assistance. The quality of the project is then $q = \gamma'v(e_d, e_g)$, where $\gamma' < \gamma$. However, with an international NGO, donor participation is essential in the sense that without it, the quality of the project is very low. Indeed, we assume $q = 0$ in this case.

The donor and government value quality differently: the gross benefit to the government is $\theta_g q$ and that to the donor is $\theta_d q$. They also care about the costs of the inputs, so the objective of the government is to maximize $\theta_g q - e_g$, and that of the donor is to maximize $\theta_d q - e_d$. Even if one of the parties pulls out of the partnership, it still derives benefits from any quality that turns out to be produced.

3.1.1 Payoffs under international NGO implementation

We follow the standard assumption in these kinds of models and assume Nash bargaining over the ex post surplus after inputs have been sunk. Since the value of output is zero when bargaining breaks down, in this case, the net ex post surplus is the same as the gross ex post surplus, $(\theta_g + \theta_d)v(e_d, e_g)$, which is shared equally between the two parties at the Nash solution. Thus the ex ante payoff to the government is

$$\bar{\theta}v(e_d, e_g) - e_g$$

where $\bar{\theta}$ is the mean of the θ s. The government chooses its input level to satisfy the first order condition

$$\bar{\theta}v_g(e_d, e_g) = 1. \tag{5}$$

Similarly, the ex ante payoff to the donor is

$$\bar{\theta}v(e_d, e_g) - e_d$$

yielding the first order condition

$$\bar{\theta}v_d(e_d, e_g) = 1. \tag{6}$$

Let us denote the (Nash) equilibrium input choices defined by (5) and (6) by (e_d^I, e_g^I) . Employment of an international NGO is akin to joint ownership of the project. Joint ownership means neither party has control rights over the project's assets in the event of a break down in bargaining, so it effectively languishes unused when the parties disagree.

3.1.2 Payoffs under grass-roots NGO implementation

The net ex post surplus that is bargained over in this case is different to that when the project is implemented by an international NGO. The gross ex post surplus (ignoring input costs) is smaller, and equal to $\gamma(\theta_d + \theta_g)v(e_d, e_g)$. Also, some surplus – equal to $\gamma'(\theta_d + \theta_g)v(e_d, e_g)$ – is generated when bargaining breaks down, so the net surplus is smaller still. Each party's ex ante payoff is equal to its outside option plus half the net surplus, less the cost of inputs.

Thus, the government's ex ante payoff is

$$\begin{aligned} & \underbrace{\gamma' \theta_g v(e_d, e_g)}_{\text{Government's outside option}} + \underbrace{\frac{(\gamma - \gamma')(\theta_d + \theta_g)v(e_d, e_g)}{2}}_{\text{Half the gains from trade}} - e_g \\ = & (\gamma \bar{\theta} + \gamma' \Delta \theta) v(e_d, e_g) - e_g \end{aligned}$$

where $\Delta \theta = (\theta_g - \theta_d)/2$. The input e_g is thus chosen by the government to satisfy

$$(\gamma \bar{\theta} + \gamma' \Delta \theta) v_g(e_d, e_g) = 1. \quad (7)$$

The donor's ex ante payoff is

$$\begin{aligned} & \underbrace{\gamma' \theta_d v(e_d, e_g)}_{\text{Donor's outside option}} + \underbrace{\frac{(\gamma - \gamma')(\theta_d + \theta_g)v(e_d, e_g)}{2}}_{\text{Half the gains from trade}} - e_d \\ = & (\gamma \bar{\theta} - \gamma' \Delta \theta) v(e_d, e_g) - e_d \end{aligned}$$

which is maximized when e_d satisfies

$$(\gamma \bar{\theta} - \gamma' \Delta \theta) v_d(e_d, e_g) = 1. \quad (8)$$

Denote the solutions to (7) and (8) by (e_d^{GR}, e_g^{GR}) .

3.2 Comparative statics

To arrive a simple comparative statics results, let us assume that $v(.,.)$ is additively separable:¹¹

$$v(e_d, e_g) = \eta_d \phi(e_d) + \eta_g \psi(e_d).$$

Then it is easy to show that under a grass roots NGO the inputs of *both* the government *and* the donor are lower than with international NGO provision if and only if the difference between the preference parameters is small enough. In particular, e_d and e_g both fall under grass roots provision if and only if¹²

$$-\left(\frac{1-\gamma}{\gamma'}\right) < \frac{\Delta\theta}{\bar{\theta}} < \left(\frac{1-\gamma}{\gamma'}\right).$$

Outside this interval, the directions of change of the two inputs differ. When $\frac{\Delta\theta}{\bar{\theta}} > \left(\frac{1-\gamma}{\gamma'}\right)$, $e_g^{GR} > e_g^I$ and $e_d^{GR} < e_d^I$, while for $\frac{\Delta\theta}{\bar{\theta}} < -\left(\frac{1-\gamma}{\gamma'}\right)$, $e_g^{GR} < e_g^I$ and $e_d^{GR} > e_d^I$.

Thus when donor and government valuations of the service do not differ much, provision through an international NGO yields higher inputs from both, and higher joint surplus compared with grass roots provision (see Figure 4).¹³ When the government's valuation of service quality is sufficiently higher than the donor's, grass roots provision (which corresponds to government ownership) increases the government's input, but reduces the donor's. Symmetrically, when the donor's valuation is sufficiently greater than the government's, grass roots provision increases the donor's input but reduces the government's.

Note that $\max |\Delta\theta/\bar{\theta}| = 1$, so that if $(1-\gamma)/\gamma' > 1$, then grass roots provision always leads to lower inputs from the donor and the government. This happens whenever $\gamma < 1/2$, or else when

¹¹ Besley and Ghatak (2000) employ a similar assumption. In our specification, we write $v(e_d, e_g) = \eta_d \phi(e_d) + \eta_g \psi(e_g)$ with $\phi(.)$ and $\psi(.)$ increasing and concave. Our earlier assumptions mean that under (cooperative) grass roots NGO provision, quality is $\gamma[\eta_d \phi(e_d) + \eta_g \psi(e_g)]$, and when bargaining breaks down in this situation, quality is $\gamma'[\eta_d \phi(e_d) + \eta_g \psi(e_g)]$. Thus the organizational structure effects the productivity of both the donor input and the government input. Besley and Ghatak (as applied to the environment we model) assume that the effect is only on the productivity of the donor input, in which case quality is $\gamma\eta_d \phi(e_d) + \eta_g \psi(e_g)$ when the grass roots NGO is used cooperatively, for example. The qualitative nature of the comparative statics results are unaffected, although they are more symmetric under our normalization.

¹² $e_g^{GR} \geq e_g^I$ if and only if $(\gamma\bar{\theta} + \gamma'\Delta\theta) \geq \bar{\theta}$, and $e_d^{GR} \geq e_d^I$ if and only if $(\gamma\bar{\theta} - \gamma'\Delta\theta) \geq \bar{\theta}$.

¹³ Joint surplus increases because we know that under international NGO provision, inputs are below the joint surplus maximizing levels, characterized by $2\bar{\theta}v_i = 1$, for $i = g, d$.

γ' is significantly less than γ .

The reason for this symmetry lies in the public good nature of the output. By employing a grass roots NGO, and thus relinquishing direct involvement in the project, a donor improves the outside options of *both* itself and the government. If one of the parties values the output enough, the improvement in the outside option, and hence in the returns to effort offset the reduction in such returns due to the less efficient technology used.

4 Empirical implications

It is hoped that the models above can help to guide empirical research on the behavior of NGOs, and to thus inform policy decisions regarding them. In light of the discussion of section 3, two sets of empirical issues suggest themselves. The first concerns the production and cost function of firms that provide services that are valued by governments, and the impact of NGO status on realized costs and quality. The second concerns the choices of governments, and the policies they adopt to alternative providers of these services.

Within the first set of issues, it is instructive to examine the behavior of NGOs and for-profit firms, and their responses to exogenous events. For example, comparing the activities of both types across districts could reveal information about the responsiveness of NGOs to income shocks and specific needs (e.g., health care). Comparing these with the behavior of civil servants could also be informative. Do NGOs act to complement direct public provision or substitute for it, and are these cross elasticities different between NGOs and other private sector providers? What kinds of activities – health, education, credit, rural extension services, etc. – are NGOs more likely to be represented in?

Making direct comparisons between the way different types of providers are treated by governments – e.g., the correlation between NGOness and the price paid by government for contracted services – may pose some data problems. Some aspects of services are actively contracted out (e.g., food preparation in hospitals), but often the service itself is provided by government employees.

In some cases however (e.g., Brazil) data may be available to examine the issue of government policy directly. Alternatively, using time series data, large changes in government expenditure policy, such as those that accompany macroeconomic adjustment programs, may provide useful information if expenditures cuts change the mix of NGO/non-NGO providers in predictable ways.

The introduction of external funding sources in section 4 suggests that an understanding of donor behavior is also important. For example, it would be worth knowing if the inputs of country governments and donors are strategic complements or substitutes, and if this relationship differs between the type of NGO used for project implementation (e.g., international versus grass roots). Also, any correlation between the types of projects implemented through international and grass roots NGOs could be used to test the idea that the former may be preferred when the parties' preferences are closely aligned, but that the latter is favored otherwise. Do government-donor partnerships survive better or longer under one arrangement than the other, and does the sectoral focus of the program/project affect the strength of the partnership and hence its optimal design? Analysis of the funding behavior of specific bilateral donor-country relationships over time could yield useful insights in this case.

References

Besley, Timothy and Stephen Coate (1991): "Public provision of private goods and the redistribution of income," *American Economic Review*, 81, September, pp. 979-984.

----- and Maitreesh Ghatak (2000): "Government versus private ownership of public goods," mimeo, LSE.

Glaeser, Edward L. and Andrei Shleifer (1998): "Not-for-profit entrepreneurs," NBER working paper 6810.

Grossman, Sanford and Oliver Hart (1986): "The costs and benefits of ownership: A theory of vertical and lateral integration," *Journal of Political Economy*, 94:691-719.

Hart, Oliver and John Moore (1990): "Property rights and the nature of the firm," *Journal of Political Economy*, 98:1119-58.

Jack, William (2000): "Decentralizing the provision of health services: An incomplete contracts approach," Policy Research Working Paper 2395, The World Bank, Development Economics Research Group, Washington DC.

Laffont, Jean-Jacques (1990): "Analysis of Hidden Gaming in a Three Level Hierarchy," *Journal of Law, Economics, and Organization*.

Martimort (1996): "The Multiprincipal Nature of Government," *European Economic Review*, 40(3-5), April, pp. 673-85.

Riddell, Roger and Mark Robinson (1995): *Non-Governmental Organizations and Rural Poverty Alleviation*, Overseas development Institute, London. Clarendon Press, Oxford.

Rose-Ackerman, Susan (1996): "Altruism, Nonprofits, and Economic Theory," *Journal of Economic Literature*, XXXIV(2), June, pp. 701-728.

Salamon, Lester M. (2000): "Non-state actors on the global scene: The case of civil society organizations," delivered at the University of Maryland Conference on The Evolution of the Nation State Through 2015.

Stocker, P. and R. Barbor-Might (1999): "Partnerships between internationaal agencies and NGOs working in development," Working paper, National Resources Institute, University of Greenwich.

Tirole, Jean (1986): "Hierarchies and Bureaucracies: On the Role of Collusion in Organizations," *Journal of Law, Economics, and Organization*, 2(2), pp. 181-214.

World Bank (1999): Internal report from OED (Operations and Evaluations Department)

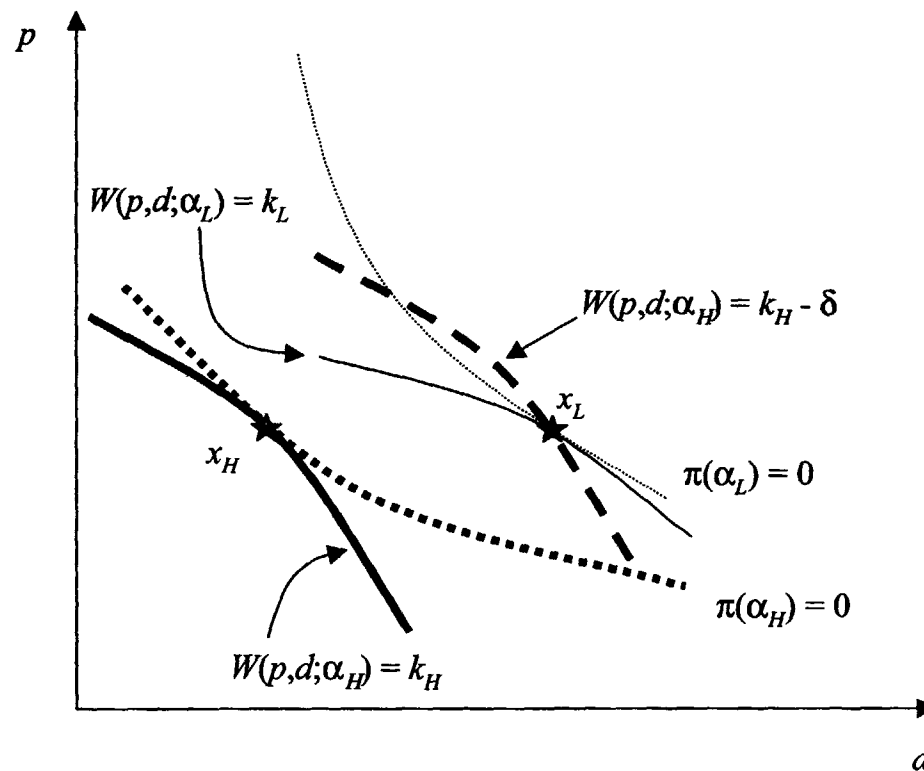


Figure 1. First-best contracts x_H and x_L . (The unbroken lines and the dashed line are iso-welfare curves, and dotted lines are iso-profit curves. Bold lines refer to α_H -types, and light lines to α_L -types.)

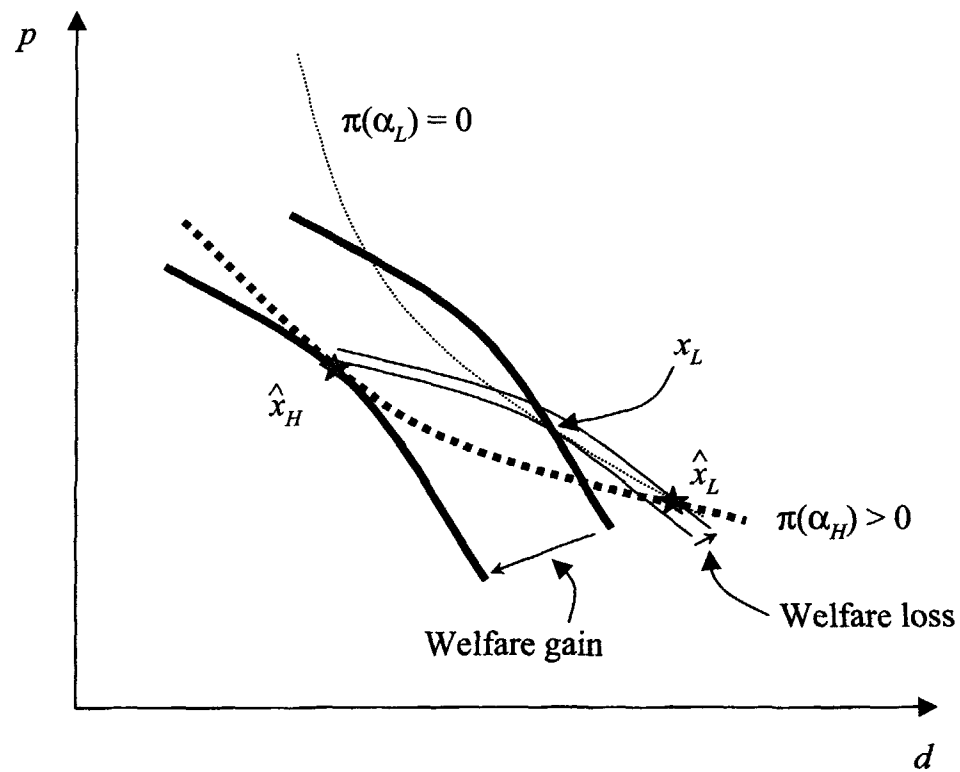


Figure 2: Second-best incentive compatible contracts, \hat{x}_H and \hat{x}_L .

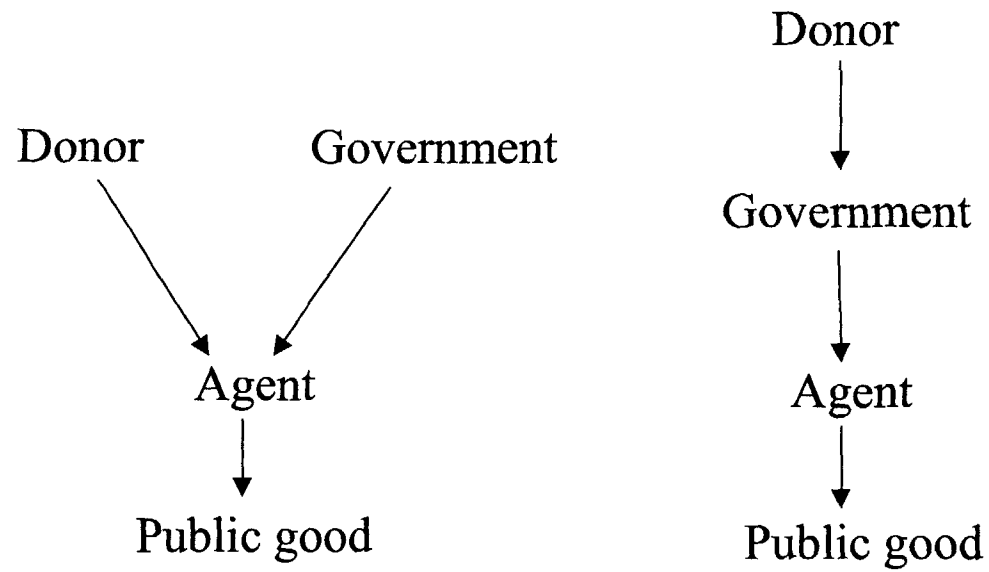


Figure 3: Donor-government relations in international and grass roots NGOs.

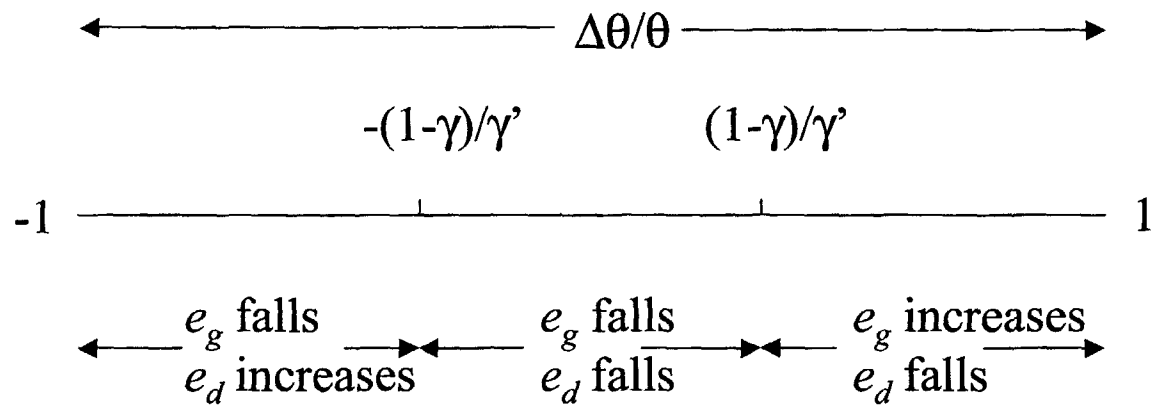


Figure 4: The effects on government and donor inputs of changing from international NGO implementation to grass roots NGO provision.

Policy Research Working Paper Series

Title	Author	Date	Contact for paper
WPS2615 Trade, Growth, and Poverty	David Dollar Aart Kraay	June 2001	E. Khine 37471
WPS2616 Reforming Land and Real Estate Markets	Ahmed Galal Omar Razzaz	June 2001	D. Dietrich 34995
WPS2617 Shanghai Rising in a Globalizing World	Shahid Yusuf Weiping Wu	June 2001	S. Yusuf 82339
WPS2618 Globalization and the Challenge for Developing Countries	Shahid Yusuf	June 2001	S. Yusuf 82339
WPS2619 Do Banks Provision for Bad Loans in Good Times? Empirical Evidence and Policy Implications	Michele Cavallo Giovanni Majnoni	June 2001	E. Mekhova 85986
WPS2620 Who Owns the Media?	Simeon Djankov Caralee McLiesh Tatiana Nenova Andrei Shleifer	June 2001	R. Sugui 37951
WPS2621 Does Indonesia Have a "Low-Pay" Civil Service?	Deon Filmer David L. Lindauer	June 2001	H. Sladovich 37698
WPS2622 Community Programs and Women's Participation: The Chinese Experience	David Coady Xinyi Dai Limin Wang	June 2001	L. Wang 37596
WPS 2623 Trade Liberalization in China's Accession to the World Trade Organization	Elena Ianchovichina Will Martin	June 2001	L. Tabada 36896
WPS2624 Are Incentives Everything? Payment Mechanisms for Health Care Providers in Developing Countries	Varun Gauri	June 2001	H. Sladovich 37698
WPS2625 Australia's Experience with Local Content Programs in the Auto Industry: Lessons for India and Other Developing Countries	Garry Pursell	June 2001	L. Tabada 36896
WPS2626 Mandatory Severance Pay: Its Coverage and Effects in Peru	Donna MacIsaac Martín Rama	June 2001	H. Sladovich 37698
WPS2627 With the Help of One's Neighbors: Externalities in the Production of Nutrition in Peru	Harold Alderman Jesko Hentschel Ricardo Sabates	June 2001	P. Sader 33902

Policy Research Working Paper Series

	Title	Author	Date	Contact for paper
WPS2628	Monopoly Power and Distribution in Fragmented Markets: The Case of Groundwater	Hanan G. Jacoby Rinku Murgai Saeed Ur Rehman	June 2001	P. Kokila 33716
WPS2629	Bridging the Digital Divide: How Enterprise Ownership and Foreign Competition Affect Internet Access in Eastern Europe and Central Asia	George R. G. Clarke	July 2001	P. Sintim-Aboagye 37644
WPS2630	Parallel Imports of Pharmaceutical Products in the European Union	Mattias Ganslandt	July 2001	L. Tabada 36896
WPS2631	Pension Reform in Hungary: A Preliminary Assessment	Roberta Rocha Dimitri Vittas	July 2001	L. Gross 37030
WPS2632	Human Capital and Growth: The Recovered Role of Education Systems	Sébastien Dessus	July 2001	K. Mazo 39744
WPS2633	Bank Privatization in Argentina: A Model of Political Constraints and Differential Outcomes	George R. G. Clarke Robert Cull	July 2001	P. Sintim-Aboagye 37644
WPS2634	Chile's Regional Arrangements and the Free Trade Agreement of the Americas: The Importance of Market Access	Glenn W. Harrison Thomas F. Rutherford David G. Tarr	July 2001	L. Tabada 36896
WPS2635	Optimal Use of Carbon Sequestration in a Global Climate Change Strategy: Is There a Wooden Bridge to a Clean Energy Future?	Franck Lecocq Kenneth Chomitz	July 2001	V. Soukhanov 35721
WPS2636	Processes, Information, and Accounting Gaps in the Regulation of Argentina's Private Railways	Javier Campos-Méndez Antonio Estache Lourdes Trujillo	July 2001	G. Chenet-Smith 36370
WPS2637	Technical Efficiency Gains from Port Reform: The Potential for Yardstick Competition in Mexico	Antonio Estache Marianela González Lourdes Trujillo	July 2001	G. Chenet-Smith 36370
WPS2638	On Financing Global and International Public Goods	Todd Sandler	July 2001	S. Kpundeh 39591